

# Notice of Allowability

Application No.

10/718,740

Examiner

Sylvia R MacArthur

Applicant(s)

MARTIN, MAYNARD

Art Unit

1763

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the TD mailed 10/12/04.
2. ☒ The allowed claim(s) is/are 15-32.
3. ☒ The drawings filed on 20 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Terminal Disclaimer***

1. The terminal disclaimer filed on 10/12/2004 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of US 5,688,359; 6,086,778; 6,673,156 has been reviewed and is accepted. The terminal disclaimer has been recorded.

## **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Steve Ormiston on March 3, 2005.

The claims have been amended as follows:

15.(currently amended) An assembly for use in a semiconductor processing device configured to receive a gas injector, the assembly comprising:

a chamber configured to replace the gas injector in the device, the chamber open at one end and the chamber defining an inlet; and

a seal disposed about the open end of the chamber, the seal configured to establish a seal between the open end of the chamber and the device when the assembly is installed in the device.

18.(currently amended) An assembly for use in a semiconductor processing device configured to receive a gas injector, the assembly comprising:

a chamber configured to replace the gas injector in the device, the chamber open at one end and the chamber defining a liquid etchant inlet;

a reservoir coupled to the inlet;

a valve interposed between the reservoir and the inlet, the valve operative between an open position in which liquid etchant may flow from the reservoir to the inlet and a closed position in which liquid etchant may not flow from the reservoir to the inlet; and

a seal disposed about the open end of the chamber, the seal configured to establish a seal between the open end of the chamber and the device when the assembly is installed in the device.

21.(currently amended) An etch injector, comprising:

a box-shaped chamber open at one end, the chamber including opposing sidewalls, opposing endwalls and a cover plate attached to the sidewalls and endwalls, the cover plate defining an inlet port and an exhaust port; and

a seal disposed along bottom surfaces of the sidewalls and the endwalls, the seal configured to establish a seal between the bottom surfaces and a semiconductor processing device when the injector is installed in the device.

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28.(currently amended) A method for removing residue from an apparatus configured to receive a gas injector assembly, the method comprising replacing the gas injector assembly with an etch chamber and introducing a liquid etchant into the etch chamber and on to a surface of the apparatus.

***Allowable Subject Matter***

3. Claims 15-32 are allowed.

4. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record (excluding those addressed in the Terminal Disclaimer) fail to teach or fairly suggest a seal disposed about an open end of the chamber, the seal configured to establish a seal between the open end of the chamber and the device when the assembly is installed in the device. Additionally, the prior art of record fails to teach or fairly suggest a method wherein a liquid etchant is introduced into the etch chamber and on to a surface of the apparatus.


***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-F during the core hours of 8 a.m. and 2 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 571-272-1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sylvia R MacArthur  
Patent Examiner  
Art Unit 1763

March 1, 2005

*P. Hassanzadeh*  
*SPE, AU 1763*